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PATENT APPLICATION

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Thierry PONTON

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For: A DISPENSER DEVICE THAT ENABLES TWO SUBSTANCES TO BE DISPENSED IN
VARYING PROPORTIONS

SUBMISSION OF TRANSLATION OF PROVISIONAL APPLICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 CFR 1.78 (a)(5), attached is a translation of Provisional Application No. 60/444,943 filed on February 5, 2003. Upon information and belief, the translation is an accurate English translation of the provisional application as filed.

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Attached:
Translation of Provisional Application

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A DISPENSER DEVICE INCLUDING MEANS ENABLING TWO
SUBSTANCES TO BE DISPENSED IN VARYING PROPORTIONS

The present invention relates to dispenser devices
having means enabling two substances to be dispensed in
varying proportions.

European patent EP 0 758 615 describes an example of
a device enabling a plurality of sunscreens of different
indices or a sunscreen and an after-sun lotion such as a
moisturizing cream to be made available in what appears
to be a single package.

European patent application EP 0 427 609 describes a
device including an adjustment member for varying the
proportions in a mixture of two substances taken from
respective reservoirs. The adjustment member is in the
form of a rotary part serving to press to a greater or
lesser extent on a pump rod when a pushbutton is
depressed. That device does not make it possible by
means of a single adjustment member to dispense the
substance contained in one or the other reservoir, for
example.

US patent No. 5 971 210 describes a device that is
relatively complex, having a mechanism enabling actuation
of a pushbutton to be transformed into strokes of greater
or shorter length for actuating pump rods.

The supplier Versadial of Marktoberdorf, Germany,
also proposes a device having two pumps whose control
members are actuated by means of a pivoting disk secured
to the pushbutton and hinged at one end to an adjustment
member capable of turning relative to a base portion
supporting the pump bodies. Depending on the orientation
of the adjustment member, when the user presses the
pushbutton, the disk actuates the pump control members to
a greater or lesser extent, thereby enabling a mixture to
be dispensed with the desired relative proportions of the
substances taken from the reservoirs associated with the
pumps. Such a device is not designed to use standard



pumps and is also of structure that is relatively complex.

The invention seeks to propose a novel dispenser device comprising:

- 5 · two reservoirs each for containing a respective substance;
- two pumps associated with respective ones of said reservoirs and each having a moving control member which, when actuated, causes the substance contained in the
- 10 reservoir associated with the pump to be dispensed;
- a pushbutton;
- at least one elastically-deformable transmission member associated with a control member and disposed in such a manner as to transmit displacement of the
- 15 pushbutton to said control member in order to dispense substance;
- at least one adjustment member for adjusting the end-of-stroke position of the displacement at least of the control member associated with the transmission
- 20 member.

The transmission member may deform when the associated control member reaches its end-of-stroke position as imposed by the adjustment member before the other control member reaches its end-of-stroke position, thereby enabling the pushbutton to continue moving and driving said other control member.

The adjustment member may be made as one or more parts, possibly parts that are movable relative to one another.

30 By acting on the adjustment member, the invention makes it possible to vary the stroke through which at least one of the control members is displaced when the pushbutton is depressed. It is thus possible to measure out at least one of the substances in the dispensed

35 mixture.

In a preferred embodiment, the device includes two elastically-deformable transmission members disposed so

that each of them transmits displacement of the pushbutton to an associated control member in order to dispense substance, each elastically-deformable member being disposed in such a manner as to deform when the associated control member reaches the end-of-stroke position imposed by the adjustment member before the other control member so as to enable the pushbutton to continue moving and driving said other control member.

The device may include two actuator members movable relative to the pushbutton and associated respectively with the two control members, each of the two elastically-deformable transmission members being disposed in such a manner as to be interposed between a surface of the associated actuator member and the pushbutton.

Each actuator member may comprise a rod slidable in a tubular guide of the pushbutton, and the elastically-deformable member associated with said actuator member is disposed around the rod, e.g. being constituted by a helical spring working in compression.

The actuator members may be connected together by an elastically-deformable coupling assembly, which can make them easier to manufacture and handle, particularly while they are being put into place on the device.

The coupling assembly may comprise, for example, flexible arms connecting each of the actuator members to a central rod, the two arms together possibly forming an S-shape when the coupling assembly is observed along the axis of the central rod.

The coupling assembly may include endpieces fixed to the pushbutton through which the substance delivered by each of the pumps is delivered to the pushbutton.

The device may include flexible hoses enabling the substances delivered by the pumps to flow from the actuator members to housings communicating with said endpieces.

The pumps used may be standard pumps, and each control member may include a pump rod, in particular a pump rod enabling the substance delivered by the pump to be delivered through a channel inside the rod.

5 Each adjustment member may include an endpiece which is mounted at the end of the associated pump rod. The endpiece may be arranged to enable a flexible hose to be connected as mentioned above, serving to convey the substance delivered by the pump to a dispenser orifice.

10 In particular when the elastically-deformable member is a helical spring, it may bear at one end against the endpiece and at the other end against the corresponding tubular guide of the pushbutton.

15 The adjustment member may comprise a plurality of surfaces situated at different heights and against which the actuators members can come to bear when the associated control members have reached their end-of-stroke positions. The various heights may be selected in such a manner that the sum of the strokes over which the control members of the two pumps travel remains constant, regardless of the position of the adjustment member, for example it may be equal to the maximum stroke of a control member.

25 Each of said surfaces may be defined by the top edge of a tongue.

30 The adjustment member is advantageously a rotary member, i.e. it includes at least one rotary part. The tongues may be elastically deformable and arranged so as to deform elastically in contact with at least one control member during rotation of the adjustment member, so as to provide at least one hard point in the rotary travel of the adjustment member, thereby making it easier for the user to position the adjustment member in a position that corresponds to a determined mixture. The
35 tongues may thus be arranged in such a manner that in a position of the adjustment member corresponding to dispensing a given mixture, at least one control member

is disposed between portions of two consecutive tongues which prevent the adjustment member from turning.

Each tongue may have a rounded portion in which a control member can be received when the tongue is in a position for adjusting the stroke of said control member.

The bottom edges of the tongues may be situated substantially in the same plane. Each tongue may be arranged, in particular, so that in a position for adjusting the stroke of the associated control member, it comes to bear via its bottom edge against a bearing surface that is fixed relative to the corresponding pump body.

The adjustment member may have two coaxial rotary rings having tongues that enable the end of the stroke of at least one control member associated with the transmission member to be adjusted.

The rings may be interconnected via at least one gear, and in particular via two gears.

The tongues may have facing concave sides.

The pushbutton may include a top portion defining a bearing surface enabling the user to actuate the pushbutton, and an elastically-deformable skirt extending said top portion downwards.

The device may include an outlet orifice provided with an elastomer check valve.

The device may include a base portion on which the pumps are mounted and relative to which the pushbutton is movable. The base portion may include at least one portion in relief on which the adjustment member is snap-fastened, being free to turn but not free to move axially.

The base portion may include an outer skirt provided with two opposite windows giving access to the adjustment member in order to turn it.

The adjustment member may include a tubular wall provided with references, in particular graduations,

representative of different compositions of the dispensed mixture.

The reservoirs may be constituted by flasks assembled .

5 Each flask may present a cross-section that is generally semicircular in shape.

The flasks may be assembled at least by a section member to which they are engaged.

10 By way of example, the section member may include at least two walls that are at an angle to each other and a flask may be arranged to come to bear against said walls so as to be held against the section member.

At least one of the flasks may include two grooves in which said walls are received.

15 The section member may comprise an elongate central portion capable of extending over at least the major part of the height of the flask, and on each longitudinal side of said central portion two ribs each forming an outwardly-open V-shape when the section member is
20 observed in cross-section.

The section member is advantageously secured to the base portion, for example being integrally formed therewith by molding a plastics material.

25 The device may be used for packaging numerous cosmetic, pharmaceutical, household, or other substances.

One of the reservoirs may contain a sunscreen and the other reservoir may contain a moisturizer, the adjustment member serving to vary the proportion of sunscreen in the mixture and thus vary the resulting
30 index of protection.

The invention can be better understood on reading the following detailed description of non-limiting embodiments thereof, and on examining the accompanying drawings, in which:

35 · Figure 1 is a diagrammatic elevation view of a device made in accordance with the invention;

· Figure 2 is a diagrammatic and fragmentary axial section view of the Figure 1 device with the pushbutton being at rest;

· Figure 3 is a diagrammatic and fragmentary plan view of the adjustment member in particular;

· Figure 4 is a view analogous to Figure 2 showing the pushbutton depressed to dispense substance;

· Figure 5 is a diagrammatic cross-section on V-V of Figure 1; and

· Figure 6 is a view analogous to Figure 3, showing a variant embodiment.

The device 1 shown in Figures 1 and 2 comprises two flasks 2, 3 each defining a reservoir containing a substance P_1 , e.g. a sunscreen in one of the flasks and a moisturizer P_2 in the other flask, together with a dispenser head 4 comprising a stationary base portion 5 and a pushbutton 6 that is movable relative to the base portion. In the example described, the pushbutton 6 is provided with a single dispenser orifice fitted with a check valve 7 for preventing sand in particular from entering. The check valve 7 may be made of elastomer, e.g. being overmolded on the pushbutton 6.

The base portion 5 has two diametrically-opposite windows 9, only one of which can be seen in Figure 1, the window giving access to an adjustment member 10 for adjusting the proportions of the substances P_1 and P_2 in the mixture that is dispensed.

The adjustment member 10 is rotatable about the longitudinal axis X of the device 1 in the example described and it has a series of graduations 11 enabling the user to select a determined mixture presenting a desired index of protection, for example, by positioning a graduations under a mark 12 of the base portion 5.

With reference to Figure 2, it can be seen that the base portion 5 has a transverse wall 20 extending perpendicularly to the axis X and connected at its

periphery to an outer skirt 21 in which the windows 9 are made.

The transverse wall 20 is provided with two openings 22 serving to receive pumps 32 and 33 associated with the
5 flasks 2 and 3 respectively.

In the example described, each pump is standard and comprises a body 34 and a control member 35 constituted by a hollow rod presenting an internal channel through which the substance is dispensed when the rod is pushed
10 into the pump body 34. In the example described, the pumps 32 and 33 are fitted with respective dip tubes 36 extending to the bottom of the corresponding reservoir.

The base portion 5 also has an assembly skirt 25 provided with an annular bead 26 against which tabs 27 of
15 the adjustment member 10 can become snap-fastened in order to enable the adjustment member to turn about the axis X without moving axially relative to said axis.

Each pump is fixed on a neck 28 of the corresponding flask by gripping a metal ring 29, with an annular
20 sealing gasket 38 being interposed between the pump body and the top end face of the neck 28.

The flasks 2 and 3 are fixed at their top ends to the base portion 5 in the example described by snap-fastening the necks 28 against tabs 39, which tabs have
25 their top ends connected to the transverse wall 20. The necks 28 could be fixed in some other way, for example by screw fastening or by crimping.

The pushbutton 6 has a top portion 45 that is relatively rigid defining a bearing surface 46 for the
30 user, this top portion 45 being made of polypropylene, for example, and it has a bottom portion 47 which may also be made out of a plastics material that is relatively rigid, e.g. polypropylene, together with an intermediate portion 48 interconnecting the top and
35 bottom portions 45 and 47, the intermediate portion being made of a material that is elastically deformable, e.g. an elastomer material such as SEBS. The bottom portion

47 is fixed to the top portion 5 by snap-fastening, for example.

The pushbutton 6 has tubular guides 50 made in the example described integrally by being molded out of the same plastics material as the top portion 45, the guide 50 slidably receiving rods 51 each connected at its bottom end to an endpiece 52 having inserted therein the corresponding pump rod 35. The rods 51 are associated with the top pumps 32 and 33 respectively.

The two endpieces 52 are connected to each other by a coupling assembly comprising a central rod 53 and arms 54 each connecting one of the endpieces 52 to the central rod 53. When the coupling part is observed in plan view looking along the axis X, the two arms 54 are S-shaped, as can be seen in Figure 3. The top of the rod 53 is connected to an assembly portion 55 of the pushbutton which is provided with two endpieces 56 received in corresponding housings 58 of the top portion 45 of the pushbutton, these housings 58 communicating via respective channels 59 with the outlet orifice. Flexible hoses 60, e.g. made of polyethylene, serve to convey the substance delivered by each pump rod 35 to a corresponding embodiment 56, these hoses 60 being inserted at one end in openings provided for this purpose in the endpieces 52, said openings having axes perpendicular to the axes of the pump rods 35. The endpieces 56 of the coupling assembly are inserted by force into the corresponding housings 58 of the top portion 45 of the pushbutton.

Helical springs 70 working in compression are disposed on the rod 51, having their top ends bearing against the bottom edges 71 of the tubular guides 50 and having their bottom ends bearing against shoulders 72, whereby each of the endpieces 52 is connected to the corresponding rod 51. Each spring 70 serves to transform displacement of the top portion 45 of the pushbutton into displacement of the endpiece 52, which acts as the

actuator member of the corresponding pump rod 35. The springs 70 are selected to be sufficiently stiff to ensure that depressing the pushbutton can give rise to the pump rods 35 being displaced.

5 The adjustment member 10 has a circularly cylindrical wall 80 about the axis X in the example described, with the radially inner surface 81 thereof having a plurality of tongues 83 connected thereto, as can be seen in Figure 3. The adjustment member can be
10 made, for example, out of a deformable material such as POM-C and the coupling piece 51, 52, 53, 54 can be made out of the same material. It is also possible to use polypropylene.

15 The tongues 83 extend radially inwards in oblique manner, being inclined in the same circumferential direction. At their ends they have respective rounded portions, each with a concave side 86 facing inwards, and each arranged in such a manner as to be capable, in a given position of the adjustment member 10, of coming
20 substantially to overlap a portion of the periphery of a pump rod 35, as can be seen in Figure 3.

25 Two diametrically-opposite tongues 83 can come to bear simultaneously against the pump rods 35 or at least to occupy positions in the vicinity thereof so as to limit the extent to which the pump rods 35 are depressed when the pushbutton 6 is depressed.

30 The various tongues 83 are of heights that vary from one tongue to another such that the top surfaces 90 of the tongues 83 do not all lie in the same plane perpendicular to the axis X.

 In the example described, the bottom surfaces 91 of the tongues 83 all lie in a single plane.

35 Depending on the height of the tongue 83 associated with a pump rod, the endpiece 52 can entrain the pump rod to a greater or lesser extent until the bottom end of the endpiece 52 comes into abutment against the top surface 90 of the tongue, as shown in Figure 4.

Each tongue 83 associated with a pump rod 35 can thus bear via its bottom surface 91 against the pump body.

When the adjustment member 10 is turned in the direction of arrow F in Figure 3, the tongues 83 deform elastically so as to go past the pump rods 35, with the end 94 of each tongue 83 that has just gone past a pump rod 35 remaining close thereto thereafter. In a determined adjustment position, each pump rod 35 is thus disposed between the rounded portion 85 of one tongue and the end 94 of the adjacent tongue, given the direction of rotation of the adjustment member 10, thereby holding the adjustment member 10 in the corresponding position.

In the example described, the tongues 83 may be of height that increases for the first seven tongues on moving in the direction of arrow F, and then of decreasing height for the next five tongues. The tongues 83 may serve, for example, to limit the stroke of a pump rod to the following values: 0 mm; 0.65 mm; 1.3 mm; 1.95 mm; 2.6 mm; 3.25 mm; 6.5 mm; 5.85 mm; 5.20 mm; 4.5 mm; and 3.9 mm.

In the example described, the adjustment member 10 can take up eleven different positions, e.g. corresponding to the following depression strokes (in mm) for the pumps 32 and 33.

	Positions	Pump 32	Pump 33
	0	6.50	0.00
	1	5.85	0.65
	2	5.20	1.30
30	3	4.55	1.95
	4	3.90	2.60
	5	3.25	3.25
	6	2.60	3.90
	7	1.95	4.55
35	8	1.30	5.20
	9	0.65	5.85
	10	0.00	6.50

Once the user has used the adjustment member 10 to select the relative proportions of the substances P_1 and P_2 in the mixture that is to be dispensed, the pushbutton 6 can be depressed as shown in Figure 4. The

5 displacement of the pushbutton 6 is transmitted to the pump rods 35 by the springs 70. When the strokes set for the pump rods are unequal, and when the higher tongue 83 prevents displacement of the corresponding endpiece 52, the spring 70 associated with this endpiece 52 can
10 compress so as to allow the user to continue to depress the pushbutton 6 and allow the other pump rod 35 to continue moving downwards until the corresponding endpiece 52 comes to bear against the associated tongue 83.

15 During depression of the pushbutton 6, the arms 54 can deform so as to accompany the displacements of the endpieces 52.

The flasks 2 and 3 can be made in various ways, and in particular they can be blow-molded or injection blow-
20 molded, and they are preferably identical.

In addition to the necks 28 of these flasks 2 and 3 being fixed to the base portion 5 of the dispenser head, the flasks 2 and 3 may be held side by side by means of an elongate part 100 as shown in Figure 5, which part in
25 the example described is in the form of a section member having a central portion 101 with a pair of walls 102, 103, 104, and 105 forming a V-shape running along each of its longitudinal sides.

The walls 102 and 104 diverge and the flask 2
30 associated with these walls has longitudinal grooves 106 in which the walls 102 and 104 can engage by sliding so as to form a dovetail type connection. The same applies to the flask 3 which is held by the walls 103 and 105.

The section member 100 is advantageously formed
35 integrally by molding the same plastics material as the transverse wall 20 of the base portion 5.

To put a flask into place, it can be slid along the corresponding ribs in an upward direction until the neck 28 snap-fastens in the tabs of the base portion.

Figure 6 shows a variant embodiment in which the
5 adjustment member 10 is replaced by an adjustment member 10' comprising two rotary rings 101 and 102 that are coaxial about the axis of rotation X.

The outer ring 101 is connected to a wall 105
10 identical to the above-described wall 80 and on its inner circumference it carries a plurality of tongues 106 of different heights, that are concave towards the axis X and that are arranged to occupy positions beneath the endpieces 52, like the tongues 83 described above.

At its periphery, the ring 102 has tongues 108
15 arranged to come under the endpieces 52 on their sides opposite from the tongues 106.

Gears 110 and 111 turning about axes parallel to the axis X mesh with sets of teeth (not shown) formed on the rings 101 and 102 so as to transmit rotation from the
20 ring 101 to the ring 102.

The tongues 108 are of heights that corresponding to the heights of the tongues 106 so that the tongues 106 and 108 which lie under the same endpiece 52 for a given position of the ring 101 have the same height. An
25 advantage of having bearing surfaces for each of the endpieces 52 defined by tongues situated on either side of a given control member 35 is to prevent the control member 35 from being depressed beyond the intended stroke in a manner that is particularly reliable.

30 Because of the facing concave sides 120 of the tongues 106 and 108, movement of the control members 35 pass them can be accompanied by a small amount of elastic deformation of the tongues, thus making it easier to position the adjustment member 10' in the desired
35 position.

Naturally, it would not go beyond the ambit of the present invention to provide various modifications to the devices as described above.

5 In particular, it is possible to use pumps that do not include pump rods but that have some other kind of control member, for example an elastically-deformable diaphragm which may be of bulging shape, where appropriate.

10 The helical springs 70 may be replaced by other elastically-deformable transmission members, for example by one or more blocks of foam, by flexible tabs, or by at least one bridge of elastomer material.

15 Throughout the description, including in the claims, the term "comprising a" should be understood as being synchronous with "comprising at least one" unless specified to the contrary.

CLAIMS

1. A dispenser device (1) comprising:

- two reservoirs (2; 3) each for containing a respective substance (P_1 , P_2);

5 • two pumps (32; 33) associated with respective ones of said reservoirs and each having a moving control member (35) which, when actuated, causes the substance contained in the reservoir associated with the pump to be dispensed;

10 • a pushbutton (6);

 • at least one elastically-deformable transmission member (70) associated with a control member (35) and disposed in such a manner as to transmit displacement of the pushbutton (6) to said control member (35) in order to dispense substance; and

15 • at least one adjustment member (10; 10') for adjusting the end-of-stroke position of the displacement at least of the control member (35) associated with the transmission member (70).

20

2. A device according to claim 1, characterized by the fact that it includes two elastically-deformable transmission members (70) disposed so that each of them transmits displacement of the pushbutton (6) to an associated control member (35) in order to dispense substance, each elastically-deformable member (70) being disposed in such a manner as to deform when the associated control member reaches the end-of-stroke position imposed by the adjustment member (10) before the other control member (35) so as to enable the pushbutton (6) to continue moving and driving said other control member.

30

3. A device according to the preceding claim, characterized by the fact that it includes two actuator members (51, 52) movable relative to the pushbutton (6) and associated respectively with the two control members

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(35), each of the two elastically-deformable transmission members (70) being disposed in such a manner as to be interposed between a surface (72) of the associated actuator member and the pushbutton.

5

4. A device according to claim 3, characterized by the fact that each actuator member comprises a rod (51) slidable in a tubular guide (50) of the pushbutton, and by the fact that the elastically-deformable member (70) associated with said actuator member is disposed around the rod (51).

5. A device according to claim 3 or claim 4, characterized by the fact that the actuator members (51, 52) are connected together by an elastically-deformable coupling assembly (53, 54, 55).

6. A device according to the preceding claim, characterized by the fact that the coupling assembly comprises two flexible arms (54) connecting each of the actuator members (51, 52) to a central rod (53).

7. A device according to the preceding claim, characterized by the fact that the two arms (54) together form an S-shape when the coupling assembly is observed along the axis (X) of the central rod.

8. A device according to any one of claims 5 to 7, characterized by the fact that the coupling assembly includes endpieces (56) fixed to the pushbutton (6) through which the substance delivered by each of the pumps (32, 33) is delivered to the pushbutton.

9. A device according to the preceding claim, characterized by the fact that it includes flexible hoses (60) enabling the substances (P_1 ; P_2) delivered by the

pumps to flow from the actuator members (51, 52) to housings communicating with said endpieces.

10. A device according to any one of the preceding
5 claims, characterized by the fact that each control member comprises a pump rod (35), in particular a pump rod (35) enabling the substance delivered by the corresponding pump to be dispensed via a channel inside the rod.

10

11. A device according to claims 3 and 10, characterized by the fact that each actuator member (51, 52) comprises an endpiece (52) which is mounted at the end of the pump rod (35).

15

12. A device according to the preceding claim, characterized by the fact that the endpiece (52) is arranged to enable a flexible hose (60) to be connected for conveying the substance delivered by the pump to a
20 dispenser orifice.

13. A device according to claims 4 and 11, the elastically-deformable element being a helical spring (70), and the device being characterized by the fact that
25 the spring (70) has one end bearing against the endpiece (52) and an opposite end bearing against the tubular guide (50).

14. A device according to claim 3, characterized by the
30 fact that the adjustment member has a plurality of surfaces (90) situated at different heights and against which the actuator members (51, 52) can come to bear when the associated control members (35) have reached their end-of-stroke positions as imposed by the adjustment
35 member (10; 10'), the various heights being preferably selected in such a manner that the sum of the strokes

over which the control members travel is constant for all positions of the adjustment member.

15. A device according to the preceding claim,
5 characterized by the fact that each of said surfaces is defined by the top edge of a tongue (83; 106; 108).

16. A device according to the preceding claim,
characterized by the fact that the adjustment member (10;
10') is rotary and by the fact that said tongues (83;
106; 108) are elastically deformable and arranged so as
to deform elastically in contact with at least a control
member (35) during turning of the adjustment member.

17. A device according to claim 16, characterized by the
fact that the tongues (83) are arranged in such a manner
that in a position of the adjustment member corresponding
to dispensing a given mixture, at least one of the
control members (35) is disposed between portions (85;
94) of two consecutive tongues (83) which prevent the
adjustment member from turning.

18. A device according to either one of the two
immediately preceding claims, characterized by the fact
25 that each tongue (83; 106; 108) presents a rounded
portion (85; 120) in which a control member (35) can be
received when the tongue (83; 106; 108) is in a position
for adjusting the stroke of the control member.

19. A device according to any one of claims 15 to 18,
characterized by the fact that said tongues (83; 106;
108) are of different heights, the bottom edges (91) of
the tongues being situated substantially in the same
plane.

20. A device according to any one of claims 15 to 19,
characterized by the fact that each tongue (83) is

arranged in its position for adjusting the stroke of the associated control member to come to bear via its bottom edge (91) against a surface that is fixed relative to the body (34) of the corresponding pump.

5

21. A device according to any one of the preceding claims, characterized by the fact that the device includes a base portion (5) having an outer skirt (21) provided with two opposite windows (9) giving access to the adjustment member (10) in order to be able to turn it.

22. A device according to the preceding claim, characterized by the fact that the adjustment member has a tubular wall (80; 105) provided with references, in particular graduations (11) representative of different compositions that can be dispensed.

23. A device according to any one of the preceding claims, characterized by the fact that the pushbutton (6) has a top portion (45) defining a bearing surface (46) enabling the user to actuate the pushbutton (6), and an elastically-deformable skirt (48) extending said top portion (45) downwards.

25

24. A device according to any one of the preceding claims, characterized by the fact that it includes an outlet orifice provided with a check valve (7) made of elastomer.

30

25. A device according to any one of the preceding claims, characterized by the fact that it includes a base portion (5) on which the pumps are mounted and relative to which the pushbutton (6) is movable.

35

26. A device according to either one of the two immediately preceding claims, characterized by the fact

that the base portion (5) includes at least one portion in relief (26) against which the adjustment member (10) is snap-fastened, being free to turn while being prevented from moving axially.

5

27. A device according to claim 1, characterized by the fact that the adjustment member (10') has two coaxial rotary rings (101, 102) having tongues (106, 108) for adjusting the end-of-stroke position of at least the control member associated with the transmission member.

10

28. A device according to claim 27, characterized by the fact that the rings are interconnected by at least one gear (110; 111).

15

29. A device according to claim 27 or claim 28, characterized by the fact that the tongues (106; 108) present facing concave surfaces.

20

30. A device according to any one of the preceding claims, characterized by the fact that the reservoirs (2, 3) are constituted by flasks assembled thereto.

25

31. A device according to the preceding claim, characterized by the fact that each of said flasks (2, 3) presents a cross-section that is generally semicircular in shape.

30

32. A device according to either one of the two immediately preceding claims, characterized by the fact that the flasks (2, 3) are assembled thereto by means of a section member (100) on which they are engaged.

35

33. A device according to the preceding claim, characterized by the fact that the section member has at least two walls (103, 105) forming an angle between each

other, and by the fact that a flask (3) is arranged to bear against said walls.

34. A device according to the preceding claim,
5 characterized by the fact that at least one flask has two grooves (106) in which said walls (103, 105) engage.

35. A device according to any one of claims 32 to 34,
characterized by the fact that the section member (100)
10 comprises a central portion (101) of elongate shape extending over at least the major part of the height of the flasks, with two pairs of ribs extending from respective longitudinal sides of said central portion, each pair of ribs forming an outwardly-open V-shape when
15 the section member is observed in cross-section.

36. A device according to claim 25 and any one of claims 32 to 35, characterized by the fact that the section member (100) is secured to the base portion (5).
20

37. A device according to the preceding claim, characterized by the fact that the section member (100) is made integrally with the base portion by molding a plastics material.
25

38. A device according to any one of the preceding claims, characterized by the fact that one of the reservoirs contains a sunscreen.

30 39. A device according to the preceding claim, characterized by the fact that the other reservoir contains a moisturizer.

A B S T R A C T

5 L'OREAL

"A dispenser device including means enabling two
substances to be dispensed in varying proportions"

10

The present invention provides a dispenser device
(1) comprising:

- 15 · two reservoirs (2; 3) each for containing a
 respective substance;
- two pumps associated with respective ones of said
reservoirs and each having a moving control member which,
when actuated, causes the substance contained in the
reservoir associated with the pump to be dispensed;
- 20 · a pushbutton (6);
- at least one elastically-deformable transmission
member associated with a control member and disposed in
such a manner as to transmit displacement of the
pushbutton (6) to said control member in order to
- 25 dispense substance; and
- at least one adjustment member (10) for adjusting
the end-of-stroke position of the displacement at least
of the control member associated with the transmission
member.

30

Figure: 1